

AMENDMENT TO THE CLAIMS

The following claim set replaces all prior versions, and listings, of claims in the application:

1. (currently amended) A curable rapid prototyping composition comprising:
 - (i) at least 50wt%, relative to the total weight of the composition, of one or more aromatic epoxies; and
 - (ii) one or more aliphatic epoxies; and
 - (iii) one or more oxetanes;wherein said composition, after full cure, has a heat deflection temperature ~~(1.82 MPa)~~ of at least 105°C under a pressure of 1.82 MPa, and an elongation at break of at least 1.5%.
2. (original) The composition of claim 1, wherein said composition comprises two or more aromatic epoxies.
- 3 - 5. (cancelled)
6. (currently amended) The composition according to ~~claim 5~~ claim 1, wherein said composition comprises 5-40 wt%, relative to the total weight of the composition, of said one or more oxetanes.
7. (previously presented) The composition according to claim 1, wherein said one or more aliphatic epoxies consist essentially of epoxies comprising a cycloaliphatic ring structure.
8. (previously presented) The composition according to claim 1, wherein said one or more aliphatic epoxies include an epoxy comprising two cyclohexene oxide structures.

9. (previously presented) The composition according to claim 1, wherein said composition comprises 5-30 wt% of said one or more aliphatic epoxies.

10. (previously presented) The composition according to claim 1, wherein said composition comprises an epoxy having no more than one epoxy group.

11. (previously presented) The composition according to claim 1, wherein said composition further comprises one or more free radical polymerizable components.

12. (original) The composition of claim 11, wherein said one or more free radical polymerizable components include a component having 5 or 6 (meth)acrylate groups.

13. (previously presented) The composition according to claim 11, wherein said composition comprises 5-25 wt%, relative to the total weight of the composition, of said one or more free radical polymerizable component.

14. (previously presented) The composition according to claim 1, wherein said one or more aromatic epoxies include a phenol epoxy novolac and/or a cresol epoxy novolac.

15. (previously presented) The composition according to claim 1, wherein said one or more aromatic epoxies includes a bisphenol diglycidyl ether.

16. (previously presented) The composition according to claim 1, wherein said composition comprises a (meth)acrylate functional pentaerythritol derivative.

17. (previously presented) The composition according to claim 1, wherein said composition further comprises a cationic photoinitiator and a free radical photoinitiator.

18. (currently amended) The composition according to claim 1, wherein said composition comprises about 0-4 wt% of hydroxy-functional components that are

absent ~~a curable~~ an acrylate, epoxy or oxetane group and are not selected from the group consisting of photoinitiators.

19. (previously presented) The composition according to claim 1, wherein said heat deflection temperature is at least 115°C.

20. (previously presented) The composition according to claim 1, wherein said heat deflection temperature is at least 125°C.

21. (previously presented) The composition according to claim 1, wherein said elongation to break is at least 2%.

22. (previously presented) The composition according to claim 1, wherein said elongation to break is at least 3%.

23. (previously presented) The composition according to claim 1, wherein said composition has an E10 cure speed of less than 80 mJ/cm².

24. (currently amended) The composition according to claim 1, wherein said composition has a viscosity of less than 750 ~~mPas~~ mPa.s at 30°C.

25. (previously presented) The composition according to claim 1, wherein said composition, after full cure, has a tensile strength of at least 35 MPa.

26. (previously presented) The composition according to claim 1, wherein said composition, after full cure, has a modulus of at least 2000 MPa.

27. (previously presented) The composition according to claim 1, wherein said composition comprises a color-changing dye.

28. (currently amended) ~~The A curable~~ The composition according to claim 1,
wherein the composition has ~~having~~ an E10 cure speed of less than 80 mJ/cm² and,
wherein the composition, after full cure by radiation and heat, has a heat deflection

temperature (~~1.82 MPa~~) of at least 125°C under a pressure of 1.82 MPa and an elongation at break of at least 2.5%.

29. (previously presented) The composition according to claim 1, wherein said composition comprises, relative to the total weight of the composition, about 0 wt% filler.

30. (currently amended) A rapid prototyping process comprising:

- (1) coating a layer of a curable rapid prototyping composition ~~according to claim 1~~ onto a surface, the composition comprising (i) at least 50wt%, relative to the total weight of the composition, of one or more aromatic epoxies, (ii) one or more aliphatic epoxies, and (iii) one or more oxetanes;
- (2) exposing said layer imagewise to actinic radiation to form an imaged cross-section;
- (3) coating a layer of ~~said~~ the curable rapid prototyping composition ~~according to claim 1~~ onto the previously exposed imaged cross-section obtained in step (2);
- (4) exposing said layer from step (3) imagewise to actinic radiation to form an additional imaged cross-section;
- (5) repeating steps (3) and (4) a sufficient number of times to form a three-dimensional article; and thereafter
- (6) curing the article, wherein the article, after full cure, has a heat deflection temperature of at least 105°C under a pressure of 1.82 MPa, and an elongation at break of at least 1.5%.

31 -34. (canceled) An article obtainable by the process of claim 30.

35. (new) The method of claim 30, wherein said composition comprises two or more aromatic epoxies.

36. (new) The method according to claim 30, wherein said composition comprises at least 25 wt%, relative to the total weight of the composition, of said one or more aromatic epoxies.

37. (new) The method according to claim 30, wherein said composition comprises 5-40 wt%, relative to the total weight of the composition, of said one or more oxetanes.

38. (new) The method according to claim 30, wherein said one or more aliphatic epoxies consist essentially of epoxies comprising a cycloaliphatic ring structure.

39. (new) The method according to claim 30, wherein said one or more aliphatic epoxies include an epoxy comprising two cyclohexene oxide structures.

40. (new) The method according to claim 30, wherein said composition comprises 5-30 wt% of said one or more aliphatic epoxies.

41. (new) The method according to claim 30, wherein said composition comprises an epoxy having no more than one epoxy group.

42. (new) The method according to claim 30, wherein said composition further comprises one or more free radical polymerizable components.

43. (new) The method of claim 42, wherein said one or more free radical polymerizable components include a component having 5 or 6 (meth)acrylate groups.

44. (new) The method according to claim 42, wherein said composition comprises 5-25 wt%, relative to the total weight of the composition, of said one or more free radical polymerizable component.

45. (new) The method according to claim 30, wherein said one or more aromatic epoxies include a phenol epoxy novolac and/or a cresol epoxy novolac.

46. (new) The method according to claim 30, wherein said one or more aromatic epoxies includes a bisphenol diglycidyl ether.

47. (new) The method according to claim 30, wherein said composition comprises a (meth)acrylate functional pentaerythritol derivative.

48. (new) The method according to claim 30, wherein said composition further comprises a cationic photoinitiator and a free radical photoinitiator.

49. (new) The method according to claim 30, wherein said composition comprises about 0-4 wt% of hydroxy-functional components that are absent a curable group and are not selected from the group consisting of photoinitiators.

50. (new) The method according to claim 30, wherein said heat deflection temperature is at least 115°C.

51. (new) The method according to claim 30, wherein said heat deflection temperature is at least 125°C.

52. (new) The method according to claim 30, wherein said elongation to break is at least 2%.

53. (new) The method according to claim 30, wherein said elongation to break is at least 3%.

54. (new) The method according to claim 30, wherein said composition has an E10 cure speed of less than 80 mJ/cm².

55. (new) The method according to claim 30, wherein said composition has a viscosity of less than 750 mPa.s at 30°C.

56. (new) The method according to claim 30, wherein said composition, after full cure, has a tensile strength of at least 35 MPa.

57. (new) The method according to claim 30, wherein said composition, after full cure, has a modulus of at least 2000 MPa.

58. (new) The method according to claim 30, wherein said composition comprises a color-changing dye.

59. (new) The method according to claim 30, wherein the composition has an E10 cure speed of less than 80 mJ/cm^2 and, wherein the composition, after full cure, has a heat deflection temperature of at least 125°C under a pressure of 1.82 MPa and an elongation at break of at least 2.5%.

60. (new) An article made by the process of claim 30.

61. (new) The article of claim 60, wherein the heat deflection temperature is at least 115°C .

62. (new) The article of claim 60, wherein the heat deflection temperature is at least 125°C .

63. (new) The article of claim 60, wherein the elongation to break is at least 2%.

64. (new) The article of claim 60, wherein the elongation to break is at least 3%.